STATE OF TENNESSEE
AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531

OPERATING PERMIT Issued Pursuant to Tennessee Air Quality Act

Date Issued: June 2, 2014 Date Expires: December 1, 2023	Permit Number: 068581P
Issued To: Genco 1, Inc.	Installation Address: 7502 Eastgate Boulevard Lebanon
Installation Description: Natural Gas Fired IC Engine (176 hp) for Emergency Generator	Emission Source Reference No. 95-0345-01 NSPS, Subpart JJJJ MACT, Subpart ZZZZ

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. The application that was utilized in the preparation of this permit is dated April 8, 2014, and is signed by Brad Tarr, GM for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(conditions continued on next page)

Barry R. Stephens
TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON-TRANSFERABLE **POST AT INSTALLATION ADDRESS**

2. The stated design power output capacity of the engine is 176 brake horsepower (br-hp).

Compliance method: This condition is a statement of design capacity for this source. If the permittee wishes to increase the design or maximum capacity of this source, the permittee shall pursue the appropriate procedure in accordance with 1200-03-09-.01(1) of TAPCR.

3. Particulate matter (PM) emitted from the engine shall not exceed 0.60 pounds per million British thermal unit of heat input (0.27 lb/hr).

TAPCR 1200-03-06-.02(2).

Compliance method: Compliance is assured by firing only natural gas at the rated capacity listed in **Condition 2**, and the emission factor for particulate matter from AP-42, Chapter 3.2, Natural Gas-fired Reciprocating Engines.

4. Only natural gas shall be used as fuel for this source.

TAPCR 1200-03-14-.03(5)

5. The new (manufactured after July 1, 2006) emergency engine is subject to regulations under 40 CFR Part 60, Subpart JJJJ, **STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES** including any and/or all applicable emission limitations, notifications, compliance options, records, reports, etc. as referenced below in this condition. The permittee's engine shall be in compliance with the following requirements **(a) through (h)** below:

(a) Pursuant to 40 CFR §60.4233(e) and §60.4234, the emergency engine must comply with the emission standards in Table 1 to subpart JJJJ as shown below. The permittee must operate and maintain the engine to achieve these emission standards over the entire life of the engine.

Maximum engine power	**Manufacture date**	**NO_X** (g/HP-hr)	**CO** (g/HP-hr)	**VOC** (g/HP-hr)
HP >= 130	1/1/2009+	2.0	4.0	1.0

(b) Monitoring for the emergency engine shall meet all applicable monitoring requirements specified in 40 CFR §60.4237, including the installation of a non-resettable hour meter.

(c) Pursuant to 40 CFR §60.4243(b), the permittee will comply by purchasing an engine certified to the emission standards in **Condition 5(a)**. The engine (and control device, if present) must be operated and maintained according to the manufacturer's emission-related instructions. The permittee must keep records of conducted maintenance to demonstrate compliance. The permittee must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as applicable. If engine settings are adjusted according to and consistent with the manufacturer's instructions, the engine will not be considered out of compliance.

(d) Pursuant to 40 CFR §60.4243(d), the permittee must operate the emergency stationary ICE according to the following requirements. In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited. If the engine is not operated according to the following requirements, the engine will not be considered an emergency engine and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in **(i) through (iii)** below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by **Condition 5(d)(3)** counts as part of the 100 hours per calendar year allowed by this **Condition 5(d)(2)**.

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in **Condition 5(d)(2)** above. Except as provided in (i) below, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee.

(e) Pursuant to §60.4243(f), if the emergency stationary ICE (and control device, if present) is not operated and maintained according to the manufacturer's written emission-related instructions, the permittee is required to perform initial performance testing as indicated in § 60.4244, but the permittee is not required to conduct subsequent performance testing unless the engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(f) Pursuant to §60.4245(a), the permittee must keep records of (1) through (4) as follows:

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
(2) Maintenance conducted on the engine.
(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to § 60.4243(a)(2), documentation that the engine meets the emission standards.

(g) Pursuant to 40 CFR §60.4245(b), the permittee must keep records of the hours of operation of the engine and document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation (see example below). All data must be entered in the log no later than 7 days from the end of the day for which the data is required. This log must be retained for a period of not less than five (5) years.

Operation Log for Source **95-0345-01** Year_____

Operation#	Dates	Classification of operation	Start time	End time	Operation time (End – Start)	Yearly total for non-emergency time	Yearly total for emergency time
#1							
#2							
#3							
Example: #1	4/20/2014	Maintenance	10:45 AM	11:15 AM	0.50 hours	16.25 hours	50.25 hours
Example: #2	5/15/2014	Readiness Testing	1:45 PM	3:00 PM	1.25 hours	17.50 hours	50.25 hours
Example: #3	5/17/2014 5/18/2014	Power Failure caused by lightning	2:45 PM	4:00 AM	13.25 hours	17.50 hours	63.50 hours

(h) Pursuant to 40 CFR §60.4245(e), if the engine operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in **Condition 5(d)(2)(ii) and (iii)** or that operates for the purposes specified in **Condition 5(d)(3)(i)**, the permittee must submit an annual report according to the following requirements:
(1) The report must contain the following information:
(i) Company name and address where the engine is located.
(ii) Date of the report and beginning and ending dates of the reporting period.
(iii) Engine site rating and model year.
(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
(v) Hours operated for the purposes specified in **Condition 5(d)(2)(ii) and (iii)**, including the date, start time, and end time for engine operation for the purposes specified in **Condition 5(d)(2)(ii) and (iii)**.
(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in **Condition 5(d)(2)(ii) and (iii)**.
(vii) Hours spent for operation for the purposes specified in **Condition 5(d)(3)(i)**, including the date, start time, and end time for engine operation for the purposes specified in **Condition 5(d)(3)(i)**. The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
(3) The annual report must be submitted to: The Technical Secretary, TN Department of Environment & Conservation, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243.

6. The permittee has designated this source as an emergency engine. According to a memorandum dated September 6, 1995 from John Seitz, Director, Office of Air Quality Planning and Standards, "EPA believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be

expected to operate under worst-case conditions." This value (500 hours) will be assumed to be the maximum operating hours per calendar year for this source for the purpose of establishing a "potential to emit" for the facility for the pollutants of concern for the engine specified in **Condition 5** and 40 CFR §60.4243(d). The 500-hour value includes the 100 hours per year for maintenance checks and readiness testing as specified in **Condition 5(d)** and 40 CFR §60.4243(d). In the event the unit operates more than 500 hours during a period of a calendar year, the total annual hours of operation shall be reported to the Technical Secretary within 30 days of the end of the calendar year, along with the amount of fuel used, and actual emissions from this unit.

7. The emergency engine is subject to regulation under 40 CFR Part 63, Subpart ZZZZ, **NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES.** Pursuant to 40 CFR 63.6590(c), the permittee shall meet the requirements of 40 CFR Part 63, Subpart ZZZZ, by meeting the requirements of 40 CFR Part 60, Subpart JJJJ. No further requirements apply for the emergency engine under 40 CFR Part 63, Subpart ZZZZ.

8. For fee purposes, the permittee shall calculate its annual actual oxides of nitrogen (NO_x) emissions, particulate matter (PM) emissions, sulfur dioxide (SO_2) emissions, and volatile organic compound (VOC) emissions from this fuel-burning source using appropriate AP42 or vendor supplied emission factors, in conjunction with hours of operation of the engine. The results of these calculations shall be recorded and maintained in tabular form (see example below) and shall be retained for a period of not less than five (5) years.

Fiscal Year log of emissions from generator engine (95-0345-01) July 1, _____ to June 30, _____

Emissions from generator engine			
Pollutant	**Operating time (hr)**	**Emission Factor (gm/hp-hr)**	**Emissions (tons)**
NO_x			
SO_2			
PM			
VOC			

9. This source shall operate in accordance with the terms of this permit and the information submitted in the approved permit application.

10. This source shall comply with all applicable state and federal air pollution regulations. This includes, but is not limited to, federal regulations published under 40 CFR 63 for sources of hazardous air pollutants and 40 CFR 60, New Source Performance Standards.

11. The permittee shall apply for renewal of this permit not less than sixty (60) days prior to the permit expiration date, pursuant to Division Rule 1200-3-9-.02(3).

(end of conditions)

The permit application gives the general location of this source as 36.185704 Latitude and 86.426415 Longitude.

CURRENT EMISSIONS REQUIREMENTS AND EMISSION SUMMARY

COMPANY NAME: Genco 1, Inc.

1. EMISSION SOURCE REFERENCE NUMBER: 95-0345-01 NONATTAINMENT: ____ ATTAINMENT: X 2. LOG NUMBER: 068581P

3A. PERMIT STATUS: NEW X RENEWAL ____ RELOCATION ____ 3B. PREVIOUS PERMIT NUMBER: CONSTRUCTION: 968292P OPERATING: ____

4. IDENTIFY IF ONLY A PART OF THE SOURCE IS SUBJECT TO THIS REQUIREMENT	5. POLLUTANT	6. APPLICABLE REQUIREMENT(S): TN AIR POLLUTION CONTROL REGULATIONS, 40 CFR, PERMIT RESTRICTIONS, AIR QUALITY BASED STANDARDS	7. LIMITATION	8. MAXIMUM ACTUAL EMISSIONS			9. MAXIMUM ALLOWABLE EMISSIONS	
				IN UNITS OF ITEM 7	POUNDS / HOUR	TONS / YEAR	POUNDS / HOUR	TONS / YEAR
	TSP	1200-03-06-.02(2)					0.27	0.07
	SO2	1200-0314-.03(5)					Neg	Neg
	CO	40 CFR 60.4233(e)					1.55	0.39
	VOC	40 CFR 60.4233(e)					0.39	0.10
	NOx	40 CFR 60.4233(e)					0.78	0.19
	Opacity	1200-03-05-.03(6)	20% EPA Method 9	SOURCE OF DATA FOR EMISSIONS IN ITEM 8: Data was taken from previous permit number 968292P and the application dated April 8, 2014.				

IF THIS IS NOT A TITLE V SOURCE, IS THIS A DEFERRED SOURCE (SUBJECT TO NSPS OR NESHAPS) OR A SYNTHETIC MINOR SOURCE?
IF THE ANSWER IS YES, EXPLAIN:

ENGINEERING SPECIALIST: KM DATE: May 27, 2014 SUPERVISOR: ____ DATE: ____